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10/566,810

09/21/2006

In-Kil Park

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20575

7590

05/28/2009

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EXAMINER

ARORA, AJAY

ART UNIT

PAPER NUMBER

2892

MAIL DATE

DELIVERY MODE

05/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/566,810 | Applicant(s) PARK ET AL. | |
| | Examiner AJAY K. ARORA | Art Unit 2892 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-44 is/are pending in the application.
- 4a) Of the above claim(s) 30,31,33-36,39-41,43 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29,32,37,38 and 42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/30/06, 4/5/06, 2/14/08 & 7/3/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Embodiment 3 of Figure 7 (on which new claims 29, 32, 37, 38 and 42 read) in the reply filed on 05/12/2009 is acknowledged. The traversal is on the ground(s) that the new claim 29 is generic because it reads on all the embodiments identified by the examiner. It is noted that claim 29 is new and was not available earlier for examiner to review. However, examiner agrees that the new claim 29 is generic and reads on all the embodiments identified in the restriction requirement. As such, claim 29 will be considered a generic claim, unless it is amended in future to a form that is not generic. Having resolved the only outstanding issue mentioned in applicant's traversal as above, the election will now be treated as an election without traverse.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 29, 32, 37, 38 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 29 recites “each of the element patterns being arranged in each of the unit elements” (emphasis added). The broadest reasonable interpretation of unit elements is that they are building blocks of element patterns; i.e. several units create a pattern. Thus, whereas it is understandable how the unit elements may be arranged “in” the element patterns to form the patterns, it is not clear how each of the element patterns (i.e. the superset comprising unit elements) is arranged “in” each of the unit elements. For the purposes of this office action, it will be assume that the recitation is equivalent of “each of the element patterns being arranged with each of the unit elements”.

5. Claim 29 recites “at least two sheets” and requires “first internal electrodes formed on at least one of the sheets” and “a second internal electrode formed on at least another of the sheets”. However, claim 32 (which depends from claim 29) recites that “first conductive patterns formed on one of the sheets”; that “second conductive patterns formed on another of the sheets”, which encompasses both the “at least two sheets” recited in claim 29. However, claim 32 further requires “third conductive pattern formed on the other of the sheets” and further that it be formed “in a transverse direction of both the ends of the one sheet; and the third conductive pattern is interposed between the first and second conductive patterns”. It is not clear how this is possible in the scenario where there are only “two sheets”, which is a subset of the claimed “at least two sheets”. Applicant is also requested to show how the above limitations and claim 32 in general maps to the part callouts of the elected embodiment of Figure 7.

6. Regarding claim 42, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For the purposes of this office action, it will be assumed that the limitations following the phrase "such as" are not part of the claimed invention.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 29, 32, 37 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by IDS reference Mandai (US 5,495,387), hereinafter Mandai.

Regarding claim 29, Mandai (US 5,495,387) (refer to Figures 1-6) teaches a laminated chip element (Col. 44, lines 44-48) comprising a plurality of unit elements, comprising:

at least two sheets (12b and 12c) laminated on each other (to form 11), each of the sheets having a desired property;

a plurality of first internal electrodes (13 on sheet 12b) formed on at least one of the sheets (12b), each of the first internal electrodes being arranged in each of the unit elements;

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a second internal electrode (14 on sheet 12c) formed on at least another of the sheets (12c) to extend over the unit elements;

a plurality of element patterns (13, 14, 15, 26) including resistors (26 of Figure 6) or inductors formed on the sheets, each of the element patterns being arranged in each of the unit elements;

a plurality of first (18 of Figure 6) and second (20 of Figure 6) external terminals, which are input and output terminals connected to the plurality of the first internal electrodes (13 on sheet 12b) and to the plurality of the element patterns (13, 14, 15, 26), respectively;

a third external terminal (21a of Figure 6), which is a common terminal connected to the second internal electrode (14); and

a protective insulation layer formed on the uppermost one of the laminated sheets (Col. 4, lines 29-30).

Regarding claim 32, Mandai (refer to Figures 1-6) teaches that said first internal electrode (13 on sheet 12b) includes a plurality of first conductive patterns (Col. 4, lines 18-21) formed on one of the sheets (12b) in a direction of both ends of the one sheet, each of the first conductive patterns being arranged in each of the unit elements, and a plurality of second conductive patterns (14 on sheet 12c) formed on another of the sheets (12c) in the same direction as the first conductive patterns, each of the second conductive patterns being arranged in each of the unit elements; both opposite ends of the first (13) and second (14 connected to 15) conductive patterns are

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connected to the first (18) and second (20) external terminals, respectively; said second internal electrode (14) includes a third conductive pattern (15) formed on the other of the sheets to extend over the unit elements in a transverse direction of both the ends of the one sheet; and the third conductive pattern (15) is interposed between the first and second conductive patterns.

Regarding claim 37, Mandai (refer to Figures 1-6) teaches that metal pads (24 of Figures 4 and 6) are formed to be spaced apart from each other, and the element pattern (comprising 26) is formed to connect the metal pads to each other.

Regarding claim 42, Mandai (refer to Figures 1-6) teaches that the element pattern (comprising resistor films 26) includes resistive material (Col. 4, lines 24-30).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mandai.

Regarding claim 38, Mandai (refer to Figures 1-6) teaches substantially the claimed structure including that the protective insulation layer may be a resin (Col. 4, lines 29-30) but does not specify that the resin is specifically an epoxy. However, the use of epoxy resins to form protective insulation layers is well known in the art. It would have been obvious to one of ordinary skills in the art at the time of the invention to modify Mandai so that the protective insulation layer includes epoxy. The ordinary artisan would have been motivated to modify Mandai for at least the purpose of utilizing a protective insulation layer material which provides excellent protection against external contaminants and can be easily molded to a variety of shapes.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AJAY K. ARORA whose telephone number is (571)272-8347. The examiner can normally be reached on Mon through Fri, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thao X. Le can be reached on (571) 272-1708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. K. A./
Examiner, Art Unit 2892

/Chuong A Luu/
Primary Examiner, Art Unit 2892

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